UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
WATER AND WATERSHEDS

June 23, 2011

Municipal Stormwater Permit Comments
WA Department of Ecology
Water Quality Program
P.O. Box 47696
Olympia, WA 98504-7696

RE: Comments on Ecology's LID Preliminary MS4 permit language

Dear Ecology Stormwater Program:

EPA Region 10 (EPA) would like to thank Ecology for its hard working in developing the proposed permit language for requiring Low Impact Development (LID) in the re-issued Western Washington MS4 permits. Our comments are provided below.

General Comments

EPA believes that Ecology has done a nice job of translating the August 2010 proposal into draft permit language. As noted in our comments on the August 2010 proposal, EPA supports the overall framework to include LID requirements at the site and subdivision scale, in local codes, and at the watershed scale. In general, EPA believes the proposed permit language represents an improvement relative to the August 2010 proposal.

EPA strongly supports applying the LID and flow control requirements to the thresholds consistent with the Ecology 2005 Stormwater Manual and eliminating the 1-acre threshold in the Western Washington Phase II permit. This is a very important change in the re-issuance of this permit considering the amount of development that occurs below the 1-acre threshold and the amount of development covered under the Western WA Phase II permit. Absent this important revision, a significant amount of future new development and redevelopment will further degrade the Puget Sound watershed.

EPA supports many other elements of the proposal, some of which are noted below. EPA also has several recommendations to improve the draft permit language. In general terms, EPA recommends more emphasis on the protection of native vegetation, more specific direction to local jurisdictions regarding LID local code revisions, more specific infeasibility criteria, and a more effective watershed scale LID approach.

LID Requirements and the Site and Sub-Division Scale

EPA supports the revisions to Minimum Requirement (MR) #1 which requires a more robust stormwater site plan to incorporate LID principles and requires that such plans be consistent with the revised Chapter 3 of Volume 1 of the Western Washington Stormwater Manual. EPA recommends that revisions to Chapter 3 of the Stormwater Manual, the Puget Sound LID Manual, and the Puget Sound Partnership (PSP) LID Code Guidebook all be consistent on this important LID element. For example, the draft of the PSP LID Code Guidebook includes a LID site analysis checklist, which should also be part of the other two documents with regard to site plans.

EPA believes that Minimum Requirement #5 is well designed. Small/medium size projects (2,000 – 5,000 sq ft of hard surfaces) will be required to install permeable pavement and rain gardens in a reasonable manner. Medium size projects (5,000 – 10,000 sq ft of hard surfaces) will be required to do the same, except for more prescriptive bioretention, which is reasonable and appropriate. These are important new requirements.

EPA supports the LID performance standard. EPA notes that the LID performance standard provides roughly the same amount of infiltration on site (on an annual volume basis) as EPA's 95th percentile rainfall event on-site retention standard that is contained in EPA's 2009 Energy Independent Security Act Section 438 Implementation Guidance (assuming the native infiltration rate is 0.15 in/hr or greater)[1].

EPA has concerns with the Mandatory List because the protection of native vegetation (and associated dispersion of runoff from developed areas) is not included, especially where permeable pavement or bioretention are infeasible. As proposed, when permeable pavement or bioretetion are infeasible, very little LID may be required at the site and the protection level will be far less than the LID performance standard. Native vegetation is an important and feasible LID technique which is critical for overall watershed health. EPA, therefore, recommends that for new development, a native vegetation area requirement be included as part of the Mandatory List. EPA believes the percent native vegetation targets (10% for commercial, 20% for >6 du/acre, and 35% for <6 du/acre) developed as part of the Puget Sound Partnership LID Local Regulatory Assistance Project are reasonable for all new development sites and even a higher percentage may be reasonable for sites where permeable pavement and bioretention are infeasible. EPA believes that with good site design and cluster allowances this requirement will not decrease the development potential of the site or undermine the objectives of the State's Growth Management Act. EPA also notes that including a native vegetation requirement as part of the Mandatory List is reasonable because the Mandatory List is an alternative to the LID performance standard.

[1] - Although EPA supports the proposed flow duration LID standard, Ecology may also want to consider an annual volume retention standard based on retaining the 95th percentile rain event on sites inside the UGA. Using continuous simulation modeling, EPA estimates that such a standard would translate into a volumetric retention on-site of 85% (infiltration rate = 0.2 in/hr), 69% (0.1 in/hr), and 49% (0.05 in/hr).

EPA supports the inclusion of the various LID requirements in MR#5 because they apply independently of the MR#6 (Treatment) and MR#7 (Flow Control) requirements. EPA believes these new requirements will help to minimize pollutant loading into the Puget Sound and flow impacts to small streams.

Feasibility Criteria

EPA supports many, but not all, of the infeasibility criteria. We are concerned that if the criteria are too vague and open ended the infeasibility off-ramp could result in essentially no LID at many projects. We recognize that at this stage in the process, Ecology is seeking input on what criteria are reasonable. However, in both the proposed and final re-issued permits, EPA believes the criteria must be more definitive and less open to interpretation. EPA recommends the following:

General

- For both bioretention and permeable pavements, clarify that an infeasibility determination for one portion of a site does not make use of these techniques infeasible on other locations on the site.

Bioretention

- The "within local setbacks" should be changed to refer to within a certain distance from a building structure.
- The "less than 0.15 in/hr" is a reasonable threshold for projects with less than 10,000 sq ft of hard surfaces. However, projects with good site designs have successfully used bioretention at lower infiltration rates. Thus, for larger new development projects with infiltration rates less than 0.15 in/hr, EPA recommends that language be included that require a thorough site investigation and a determination by a licensed professional that bioretention, with proper design to account for lower infiltration rates, is infeasible at any location on the site. EPA also recommends that the updated Puget Sound LID Manual describe investigation methods and proper sizing of bioretention areas with low infiltrating soils. Further, EPA also believes that this demonstration of infeasibility could be limited to just projects outside highly urbanized basins and urban centers.
- The "not compatible with surrounding drainage system" is too vague and should be eliminated or succinctly defined. Also, this criterion could be restricted to redevelopment in highly urbanized basins and centers.
- The "lack of usable space" infeasibility criterion should be either eliminated or further restricted to certain areas of re-development. For instance, this criterion could be restricted to re-development in the highly urbanized basins and urban centers.

Permeable Pavements

- If the native soils do not meet the "soil suitability criteria for providing treatment" the applicant should be required to place a six-inch layer of suitable media. Thus, this is not

an infeasibility criterion per se, but a requirement when installing permeable pavements in these circumstances.

- "Prolonged saturation conditions" should be better defined.
- The use of permeable pavements on fill soils needs further clarification. As a general matter, is permeable pavement on fill soils acceptable and under what specific conditions would the soils be unstable? And are designs available to avoid instability?

Competing Needs

- The "other federal and state requirements" criterion is too vague. EPA recommends that specific competing needs, if any, be identified in the proposed and final re-issued permits. EPA recommends that the limited number of situations where this might occur be handled through an Ecology approved waiver process.
- Incompatibility with local codes is too vague. Specific types of local codes should be identified. In addition to restricting this criterion to substantially developed sites, it could also be restricted to only apply in urbanized basins and urban centers.

LID Code Revision Requirements

EPA strongly supports the inclusion of a requirement to amend local codes to remove barriers to LID and to make LID standard practice for development activity. However, EPA believes the permit itself must include more specific direction to local jurisdictions. Although we believe the PSP LID Code Guidebook will be helpful, specific direction in the permit is needed to help local jurisdictions efficiently revise their codes as well as ensure a basic level of LID integration is achieved.

The following is an example list of requirements to include in the permit: All jurisdictions must revise their codes as necessary to provide the following:

- Comprehensive Plan that promotes LID as the preferred approach to development where feasible.
- Requirement that a site assessment report be included as part of the pre-development conference/application with the local jurisdiction's development review team to facilitate LID site lay-out and design.
- Clearing and grading ordinance (or equivalent code) that: minimizes on-site disturbance of soils, native vegetation, and hydrologic features; minimizes cut and fill; and provides construction sequencing to protect LID BMPs.
- Native vegetation area requirements for different development types that allow for land dedicated to meet critical area buffer, open space, tree retention, and landscape requirements to be included in meeting this requirement under prescribed circumstances.
- Allowance for/promotion of clustering to achieve zoning density in conjunction with protection of a native vegetation area without a variance.
- Allowance for/promotion of reduced set-back and increased building height in conjunction with protection of a native vegetation area without a variance.

- Allowance for/promotion of raingardens and bioretention areas to meet landscape requirements.
- Allowance for raingardens and bioretention areas in ROW.
- No requirement for curb and gutter on streets and allowance for/promotion of LID street designs.
- Street width requirements that minimize new impervious/hard surfaces (e.g., 28ft. or less for local streets).
- Engineering and Street Standards that include LID design specification for different road types.
- Maximum off-street parking area requirements for different development types.
- Mechanism or pre-set reduction in off-street minimum parking area requirements for projects that can demonstrate reduced need through transit and other methods.

LID Watershed Scale Requirements

The watershed scale proposal is similar to what Ecology proposed in August 2010. As noted in EPA's comments on that proposal, we believe there is some merit to the approach. However, we remain unsure if the program's benefits are worth the effort to include this provision in the permit.

In our previous comments, we recommended that one or two "basin plans" be required to be completed in Puget Sound WRIA's where MS4s are located and are likely to expand. We continue to believe that requiring "basin plans" is an effective and reasonable approach to address waterscale impacts related to the MS4s.

In this regard, we offer the following approach for Ecology's consideration. We recommend that the six Phase I jurisdictions be required to complete one or two basin plans. The basin plans should be tailored to significant water quality concerns related to the MS4s within the jurisdiction. For example, the basin plans for the four Phase I counties would be targeted at developing basins with moderate to good stream health and would include a hydrological analysis (e.g., HSPF) as well as an assessment of land use mechanisms the jurisdictions will use to minimize the impacts of future growth in the basin. The plans would also assess retrofits (primarily flow related) opportunities in the basin. Any Phase II jurisdictions within the basin would be required to participate in the plan. The basin plans for the two Phase I cities would focus on pollutant loading into local waters and would require the development of a retrofit plan. All six Phase I jurisdictions could build off of past or ongoing work to meet this requirement.

Timelines

EPA recommends that the Phase II jurisdictions be required to meet the new LID related requirements by February, 2015. This deadline is a little over two and half years after the issuance of the permit and six months after the Phase I deadline. In addition, it may be reasonable to offer a 9 month extension for Phase II jurisdictions with a population under 10,000.

Thank you for your consideration of our comments. We look forward to continuing to work with you on the re-issuance of these important permits.

Sincerely,

/s/ sent via email

John Palmer
Senior Policy Advisor
Office of Water and Watershed